Textbook Adoption Consensus Rubric for CTE

Course/Grade Middle School Engineering & Technology

Textbook Name *Exploring Design, Technology, & Engineering*

Publisher Goodheart-Willcox

Part I - Standards Alignment		
Does this textbook align with Indiana Academic Standards?	**Yes**	

Part II				
Work Students Do	*1*	*2*	*3*	
Engaging Prior Knowledge: Review to determine the extent to which the instructional materials include strategies that help students to: • Think about their current understanding and functional knowledge as it relates to a core concept • Build on previously learned skills across CTE topic areas (i.e. more than one application of a skill)		Meets		
Explanation of rating for engaging prior knowledge: With regards to engaged learning processes, it falls short. For example while a high degree of emphasis is placed upon technology, the science of technology, the engineering process through an experiential mode is lacking. Sketching for example, is not introduced until page 283. The Design process is introduced at 225.				
Metacognition Instructional materials include strategies that help students to: • Recognize the goals of the chapter/unit as well as their own learning goals • Assess their own learning • Reflect, over time, on *what* and *how* they have learned		Meets		

Explanation of rating for metacognition:

Students will be able to identify their understanding through built in assessment/check points. There are some long reading segments that could use some more stop and think points along the way.

Concept Development	Inadequate G-W response highlighted in yellow below		
The development of the concepts, or functional knowledge, for each topic area is essential so that students will achieve the performance outcomes for the selected CTE topic areas. Review textbook material to generally determine if: • Sufficient information is provided for students to be able to demonstrate competency in each concept (Providing sufficient information contributes directly to a student's achievement of the performance outcomes for that CTE topic area) • Illustrations, graphs, charts, and demonstrations are current, correlated, and accurate and presented in a variety of formats • Textbook provides objectives as well as review and reinforcement of concepts and vocabulary • Glossaries, bibliographies, indices, appendices, and tables of content are included, comprehensive, and easy to use • Essential questions are included in the chapter or lesson to guide students in recognizing "big ideas" in CTE • Learning objectives are included in chapters or lessons to guide students in recognizing what they should be able to demonstrate • The textbook materials provide guidance to the student regarding practicing, applying and rehearsing the skill using real-life scenarios • The textbook materials provide rigorous exercises that ask students to apply concepts to similar or new situations			

Explanation of rating for concept development:

Higher order thinking is not stimulated, there is more telling than the "big question" Although the text is thorough, it fails to drive concept development or higher order thought. Good direct instruction.

Goodheart-Willcox Comment:
Concept Development should be rated "Exceeds" or "Meets" instead of "Inadequate" because of the eight criteria listed in the *Concept Development* section only two seem to be questioned. Of these two criteria, higher order thinking and application is addressed through end-of-chapter Stem Connections, Curricular Connections, Activities, and TSA Modular Activities. "Big ideas" are addressed in text narrative and stimulated by Technology Headline features, Technology Explained features, Career Highlights features, and Think Green features.

Skill Development			
Skill Development *Note that every lesson/chapter may not address each of the standards/skills. Review to assure that all standards/skills are addressed throughout the book at some time.* Review textbook materials to generally determine if: • The textbook materials provide information to the students about the skills needed to meet each standard • The textbook materials provide one or more opportunities or activities for students to practice the skills needed to meet the standard • The textbook materials provide opportunities for students to assess their own skill progress, such as personal check lists • The instructional strategies use interactive, experiential methods that actively engage students in learning to help them personalize the information, such as cooperative learning, group discussions, problem solving, demonstrations and role playing • Textbook provides objectives as well as review and reinforcement of skills and vocabulary • The textbook materials provide literacy supports for students following the Common Core State Standards Reading and Writing Standards for Literacy in Technical Subjects • Textbook provides opportunities to interact with complex informational text related to CTE	Inadequate G-W response highlighted in yellow below		

Explanation of rating for skill development:

The activities that reinforce skill development are show and tell from the textbook perspective. Many of the activities are autonomous in nature and do not lend to a cooperative learning perspective.

Goodheart-Willcox Comment:

Skill Development should be rated "Exceeds" or "Meets" instead of "Inadequate" because Chapter Activities and TSA Modular Activities provide opportunities for skill development, as do many of the Activities in the end-of-chapter material and in the Tech Lab Workbook. Few of the standards in the course objectives are skill-based.

Accessibility			
Accessibility Instructional materials accessible to students address/consider: • Developmentally appropriate information • Varied learning abilities/disabilities • Special needs (e.g. auditory, visual, physical, speech, emotional) • English language proficiency • Different learning styles	Inadequate G-W response highlighted in yellow below		

Explanation of rating for accessibility:

Very direct instruction focus.

Digital Curriculum for Students			
Review digital curricular textbook materials to generally determine if: • There are robust digital resources for student learning, practice and assessment • Digital materials provide content that enhances the textbook • Digital materials provide differentiated access to content • Digital materials are intuitive and engaging • Digital materials provide opportunities for meaningful, interactive experiences • Digital materials reflect the range of multi-modal content delivery		Meets	

Explanation of rating for digital curriculum for students:

There are online crosswords, quizzes, supplemental materials as well as websites linked into the online resource. I do not believe it exceeds in all of the areas that a 21st century learner should have for full engagement.

Assessment	*1*	*2*	*3*
Assessment System Documentation includes a description of the overall system or approach to assessment and includes: • Description of alignment with national/state standards and research on assessment practices • Guidance for teachers in the use of the assessments • Evidence that assessments within the textbook materials were field-tested and/or evaluated		Meets	

Explanation of rating for assessment system:

Incorporation of an Engineering Notebook, or portfolio use is not encouraged, in my opinion.

Quality Assessment			
High quality assessments: • Include a variety of student assessment strategies • Are linked to relevant objectives/standards • Provide students with opportunities to demonstrate their understanding of key CTE concepts and apply learned skills to real-life or diverse situations (i.e., what students know and are able to do in new or different situations) • Provide criteria for students regarding learning targets and assessment criteria (e.g., rubric, performance checklist), and allow continuous access to evidence of progress • Incorporate multiple measures over time			Exceeds

Multiple Measures	Inadequate		
Examples of assessment include: • Selected response items (e.g., multiple choice, matching, true and false) • Performance assessments (e.g., posters, skits, role plays, PSAs, surveys, journals, letters to the editor, actual performance-based assessments) • Quiz and test assessments • Project-based tasks • Portfolios	**G-W response highlighted in yellow below**		

Explanation of rating for multiple measures:

minimal project based tasks, lacks portfolio, (engineering notebook, what engineers do)

Goodheart-Willcox Comment:

Multiple Measures should be rated "Exceeds" or "Meets" instead of "Inadequate" because textbook, tech lab workbook, companion website (www.g-wlearning.com/technologyeducation), teacher's resource CD, EXAMVIEW Assessment Suite and teacher's annotated edition of the textbook provide numerous types of projects, activities and questions that could be used by the teacher for assessment.

Use of Assessments	Inadequate		
Instructional materials include assessments that provide ways to modify instruction, including: • Assessments used for purposes other than determining student grades • Assessments designed to focus on learning core concepts, mastering skills, as well as evaluation • Student work informs the design or redesign of teaching strategies or sequences	**G-W response highlighted in yellow below**		

Explanation of rating for use of assessments:

Directional from the stand point that it is more a measurement of read material than understanding of concepts

Goodheart-Willcox Comment:

Use of Assessments should be rated "Exceeds" or "Meets" instead of "Inadequate" because program allows assessment tools—including EXAMVIEW Assessment Suite test software, chapter quizzes, student companion website (www.g-wlearning.com/technologyeducation)and other Tech Lab Workbook activities—to be used for pretesting, development assessment, or final assessment based on what is best for the teacher's unique classroom needs.

Accessibility	Inadequate		
The three key characteristics of accessible assessments: • Free from bias (e.g., gender, cultural) • Provide accommodations for individual and cultural differences • Provide accommodations for differences in learning styles and language proficiency	**G-W response highlighted in yellow below**		

Explanation of rating for accessibility:
presumes that the reader is from "middle America" lacks multi-culturalism.

Work Teachers Do	1	2	3
Instructional Model *The textbook's instructional model is described in the teacher's materials and supports the teacher to implement the model to organize and sequence learning experiences. Effective instructional models provide opportunities for teaching and demonstrating CTE skills, concepts and information (essential concepts).* Review the materials to determine if: • Clear procedures are provided to assist in implementation of materials • Continuity exists between learning experiences that clearly reinforce adopting and maintaining specific performance skills • Provide opportunities for students to extend, apply and evaluate what they have learned • Content, methodology, and teaching strategies are consistent with the curriculum's philosophies, values, and goals • Teacher's edition provides suggestions for evaluation, assessment, remediation, acceleration, feedback, and motivational techniques • The textbook materials provide guidance to the teacher regarding practicing, applying and rehearsing the skill using real-life scenarios • The textbook materials provide rigorous exercises that apply concepts to similar or new situations • Essential questions are included in chapters or lessons to guide teachers in recognizing "big ideas" in CTE • Learning objectives are included in chapters or lessons to guide teachers in recognizing what students should be able to demonstrate			Exceeds
Effective Teaching Strategies Instructional materials support teacher's use of effective teaching strategies that prompt students to: • Actively engage in learning to help themselves to personalize information, such as through cooperative learning, group discussions, problem solving, performance and role playing • Provide feedback to their peers and reflect on their own learning • Access prior knowledge and skill abilities to further develop functional knowledge and abilities to practice and perform CTE and creative processes • Participate and benefit from activities that expand learning opportunities outside of the classroom, such as through family activities, investigative assignments, internet review			Exceeds

assignments, concert and performance attendance and field trips			
Skill Development Review textbook materials to generally determine if: • The textbook materials provide guidance to help the teacher understand the steps required to learn and teach the skill • The textbook materials provide guidance for the teacher to model the skill • The textbook materials provide guidance to teachers for providing feedback and reinforcement following practicing of skills • The textbook materials provide literacy development and supports for teachers following the Common Core State Standards Reading and Writing Standards for Literacy in Technical Subjects • Textbook provides opportunities to instruct with complex informational text related to CTE	Inadequate G-W response highlighted in yellow below		

Explanation of rating for skill development:

project-based, hands-on, and diffentiated instruction is a weakness of this textbook.

Support for the Work Teachers Do: Instructional materials support the work teachers do by providing: • Pertinent content background information and demonstrations • Examples of typical student conceptions and demonstrations • Explanations of specific instructional models and teaching strategies to improve student understanding • Resources to assist and enhance instruction (e.g., transparencies, videos, DVDs, software, online website and/or resources) • Essential learning materials, handouts, student and teacher text, and other instructional tools necessary to achieve the provided or indicated learning objectives • Well-organized, easy to use and comprehensive teacher's edition • Suggestions for integration across the curriculum		Exceeds	
Sequencing Textbook with a coherent sequence includes: • Organization in a deliberate fashion to promote student understanding • Building from and extends concepts and skills previously developed	Inadequate G-W response highlighted in yellow below		

Explanation of rating for sequencing:
For the classroom that will not experience this over a full school year, the design process and engineering focus comes too late in the text.

Accuracy Analysis Determine if the information in the textbook is factual, accurate and current. • Terminology is accurate and appropriate • Data and information is accurately shown in charts, graphs and written text • Data, information and sources are current • Facts and data are based on appropriate data • Sources are clearly noted, credible and reputable • Images used of an appropriate quality and related to the content			Exceeds
Digital Curriculum for Teachers Review digital curricular textbook materials to generally determine if: • There are robust digital resources for student learning, practice and assessment • Digital materials provide content that enhances instruction and assessment • Digital materials provide differentiated access to content • Digital materials are intuitive and engaging • Digital materials provide opportunities for meaningful, interactive experiences • Digital materials reflect the range of multi-modal content delivery • Digital materials provide content supports for teachers to further develop expertise		Meets	
Explanation of rating for digital curriculum for teachers: could not access the online teacher data base to make a true evaluation			
Total in Each Category	8	10	15

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Total Score for Part II: <u>***33/54***</u>